COWON AW1
User Guide ver. 1.0

Auto Capsule

www.bebutton.com
UK Distributor & UK Stock

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+ This manual is based on the specifications of the product available at the point of publishing it. Note that the sample sentences, charts, pictures given as an example, detailed functions of a product, specifications of H/W and S/W recorded in this manual are subject to change without notice.

Precautions

This device is for recording the driving image of vehicles. Recording may fail depending on the given situation. The videos recorded with this product can only be used as a reference to examining the driving image.

+ This manual is based on the product available at the point of publishing it. It thus may contain errors or omissions in its technical editing.
+ Always back up any important video files.
+ COWON SYSTEMS, Inc, shall not be held accountable for any data loss, poor recording or recording error.

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Specifications

+ Product Overview

Full HD-quality video recording

+ 1920X1080 pixel, 1/2.7" image sensor is used to record a video in Full HD / 30fps / 16:9 wide.

Intelligent image sensor algorithm optimized for black box

+ Operation is optimised by swift and stable adjustment to different conditions (daytime, night-time, entering and leaving a tunnel, etc.)

Wider recording angle

+ Diagonal angles of 140° are available for a wider field of vision.

Multiple recording options and easy search

+ There are multiple options for driving-mode and parking-mode recordings, and recorded videos can easily be searched by category of event or motion file.

Built-in G sensor

+ This detects the external impact via the 3-axis acceleration sensor for auto recording.

Built-in motion sensor

+ This detects motion during parking mode recording and starts recording automatically

+ Product Overview

Built-in backup battery

+ The last recorded file is safely saved thanks to a built-in battery, even with unexpected power outage.

Safe removal and formatting of memory card

+ "Safe removal and formatting of memory card" features are available to save recorded files safely.

Video-out

+ A video-out feature is available for checking the video being recorded from an external device in real time.

Multiple indicators for smooth operation

+ Operational status of Auto Capsule is easy to monitor through voice messages, sound effects, and three-color LED indicators.

Smart Manager

+ The Smart Manager application lets you download or play recorded files using a Wi-Fi connection. Live View allows video footage to be viewed in real time, and users can set their preferences for various options.

PC Manager

+ With the PC Manager, you can manage and capture recorded videos and examine the intensity of an impact on the G sensor.

+ Product Overview

Automatic parking mode recording 1)

+ Automatically senses parking voltage and initiates parking mode recording.

Auto shutdown timer available during parking mode recording 2)

+ After a pre-set time, this automatically turns off the recording to protect the vehicle battery.

Auto shutdown voltage set-up option

+ If the vehicle battery power falls below a pre-set voltage, this automatically turns off the device.

Protection from high temperature

+ When the car's interior temperature rises above a certain level, recording is paused to protect the product. When the temperature goes down, recording resumes automatically.

Connection with external GPS

+ When connected with an external GPS receiver, vehicle location and speed information are recorded and can be checked later via the PC Manager.

1) 2) Available only under uninterrupted power connection.

+ Safety Precautions

This section regards precautions to prevent users from compromising safety or experiencing property damage. Please read the followings carefully before use. (Company has nothing whatever to do with any accident caused by a user who failed to conform to warning and precautions.)

+ Changing the installation location of the product may result in a change in the camera angle. Adjust the camera angle after installing the product and test the recorded images. Normal recording cannot be guaranteed if the product is wrongly installed.
+ This product is a device that uses a camera to record video as you drive, therefore, the quality of the recorded videos may deteriorate when taken at the point of entering/exiting a tunnel, when the shadow contrast and counter light to the subject are severe in broad daylight, or when there is no light.
+ Avoid excessive car window tinting. It deteriorates the recording quality. The white balance of the video may vary depending on the degree of tinting.
+ In the event a product is damaged or disconnected from power due to a critical and impactful accident, the product may not work and fail to record the accident.
+ Do not disassemble or alter the product at your discretion. It may cause electric shock, product damage or loss of recorded data.
+ Always keep the front window clean and free from dust before recording to guarantee the most optimal recording quality.
+ Foreign matters (e.g. fingerprints) on the lens of the black box may adversely affect the recorded

+ Safety Precautions

videos. Always keep the lens clean and free from dusts.

+ Avoid inserting metals or flammables into the MicroSD card slot. It may cause a fire or electric shock.
+ If liquid spills onto the product, disconnect the power immediately and contact the customer center.
+ Refrain from operating the product while driving. It may cause a car accident.
+ Do not use voltage other than the rated voltage specified by the product. It may cause an explosion, fire or mechanical failure.
+ Do not use the product in a place where there is flammable or explosive gas. Otherwise, ignition or explosion may ensue.
+ Keep the product away from the reach of babies, children, or pets.
+ Avoid high temperatures such as inside the closed car under hot weather or a place with direct sunlight. It may adversely affect the exterior or internal parts of the product, causing a fire.
+ Use caution not to apply too much strength to the lens and the exterior of the black box, or a mechanical failure may ensue.
+ Install the product in an area that doesn't disrupt a driver's visibility. Otherwise, it may cause an accident.
+ If you use the product for a long time, it heats up inside. So use caution not to get burned by touching it. Avoid touching the metal area when removing the MicroSD card after using the product for long hours.
+ Do not cover the black box with a cloth or other type of cover. It may contain the heat inside the

+ Safety Precautions

product, resulting in an exterior deformation or a fire.

+ Do not spray water or wax directly onto the product when cleaning the inside of a car. It may cause mechanical failure or electric shock.
+ Always use the genuine products and parts from COWON SYSTEMS Inc. COWON SYSTEMS Inc. shall not be held accountable whatsoever for failures or accidents caused by using the product and parts from other sources.
+ In accordance with the Personal Information Protection Act and other relevant regulations, users are held liable for data stored using the product's video/audio recording features. You are advised to take due precaution in storing recorded data.
+ Memory card is an expendable item which needs to be periodically examined and changed. Use a COWON-authorized memory card.
+ Before removing the memory card from the Auto Capsule, press the button for more than three seconds. Removing the memory card without doing this, it may cause recording errors or product malfunction.
+ If storage space on the memory card is insufficient, previously-recorded files can be deleted in a pre-set order. You can also transfer important recorded files can be transferred for safe-keeping on a separate storage device.
+ The backup battery is an expendable item, and its lifespan can be affected by the environment around it. Replace it with a new one when operation becomes unstable.
+ If you don't intend to use the product for a long while, unplug the power cable of the product.

+ Safety Precautions

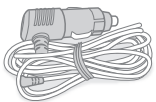
Otherwise, it may cause electric discharge of a car battery or fire. A user shall be held accountable for the product damage or car breakdown.

+ Do not use wet hands when plugging/unplugging the cigar jack cable. It may cause an electric shock.
+ Do not remove the MicroSD card when the product is in use. It may cause mechanical malfunction.
+ Plug in the power cord completely with no looseness. Otherwise, it may cause a fire.
+ Do not use the damaged cigar jack cable. It may cause a fire or an electric shock.

+ Package Components

Auto Capsule AW1

Product holder



Cigar jack

MicroSD card

MicroSD card reader

Manual & PC viewer CD, Quick Guide

double-coated tape

Cable Holder Clip (3EA)

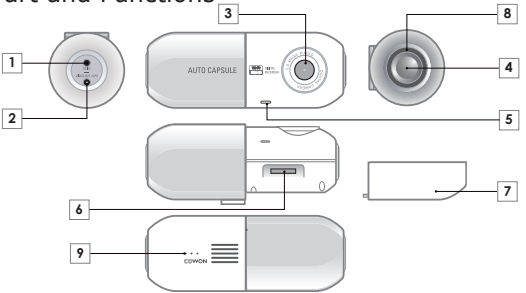
Video-out cable(Optional)

Uninterruptible Power Equipment (Optional)

External GPS receiver (Optional)

- Note that the included items may vary according to the product specifications and may look different from the images provided in the manual.

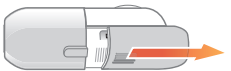
+ Name of Part and Functions



No.	Names	Functions	No.	Names	Functions
1	Power terminal	Cigar jack cable / Uninterrupted power cable terminal	6	Memory card slot	Slot for inserting the memory card.
2	VIDEO OUT / GPS	Video-out terminal/External GPS terminal	7	Rear lid	Use it to insert or remove memory card.
3	Camera lens	Records the front direction of a vehicle.	8	LED Status Indicator	Displays the operational status of the device
4	Button	Press once – Occurrence of event (manual recording) Press twice – turns Wi-Fi on and off Press and hold for more than three seconds – allows safe removal of memory card and formats a card when inserted.	9	Speaker	Plays voice messages and sound effects.
5	Microphone	A microphone for voice recording			

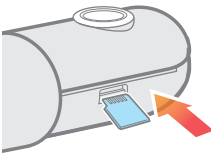
+ Installation

1



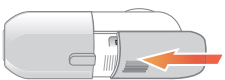
Press and push the protective lid to the side as shown in the figure.

2



Insert the memory card into the device. *

3



Push and close the protective lid in the direction of the arrow.

4

Place the AW1 in the device holder.

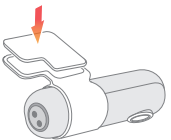
* If you forcibly insert the card in a wrong direction, it is likely to cause damage or failure. Note that you may need to receive paid repair service to fix this.

+ Installation

5

Remove the release paper from one side of the double-coated tape.

6

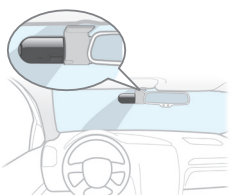


Attach the side with no release paper onto the holder.

7

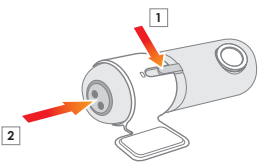
Remove the remaining release paper on the double-coated tape.

8



Choose the location where you want to attach the device to the vehicle. Wipe any foreign matter or moisture completely from the location before installing the device.

+ Separating the product



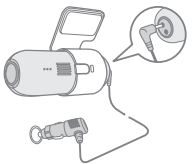
Press and hold the number 1 area of the Auto Capsule body and push the power terminal (number 2) to separate it more easily.

- Align the camera lens with number 1 to separate it easily.

* A space behind the rearview mirror is recommended for installation.
* Select the position carefully as removing the device to reposition it will cause it to significantly lose adhesiveness. Double-check the chosen position before fixing the device.

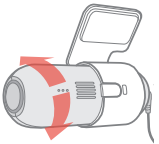
+ Installation

9



Press and push the protective lid to the side as shown in the figure.

10



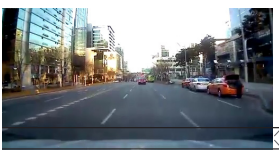
Adjust the direction of the camera lens. 1) 2)

11

A purple LED rotates when power is turned on. The LED turns red when recording starts.

1) Direction can be easily adjusted by using Live View in the Smart Manager.
It can also be adjusted while checking recorded video footage with the PC Manager.

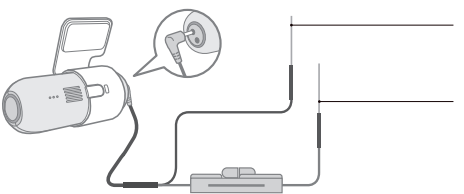
2) Adjust the camera lens so that about 10-20% of your vehicle's hood appears on the recording screen.



+ Installation

When connected with uninterrupted power, recording continues even when the vehicle is parked and the engine is turned off.

- Make sure you fully understand how to set up uninterrupted power before connecting the device.
- Each wire must be fixed to a specific dedicated location, otherwise inverse voltage can happen, seriously damaging the device.



Black wire (GND)

Fix it to a bolt attached to the metal of the vehicle's body.

Red wire (BATT+)

Connect it to the uninterrupted power fuse of the vehicle's fuse box
(hazard flasher, dome light, taillight, etc.)

* Uninterrupted power can be installed using wires from the fuse box inside the car.
* In a high-temperature environment, this product will automatically stop recording to protect product functions.
* When recording is automatically stopped, the Purple LED will flicker repeatedly, and if the temperature decreases, operation will automatically resume.

+ Start Recording

When power is turned on, the LED status indicator will rotate in purple while the voice message announces the start-up of the Auto Capsule. The LED indicator turns red while the voice message announces the start of driving mode recording; recording begins.

+ Driving Mode Recording

When power is connected, the indicator LED turns red, the voice message announces driving mode recording, and recording begins.
Driving mode recording files are stored as normal files or event files.

+ Parking Mode Recording 1)

When the car engine is turned off and battery voltage drops to parking mode, the device's driving mode recording stops and switches into a standby mode. It automatically starts recording for a certain period of time only when external impact or motion is detected. 2)

+ End Recording

When the car engine is turned off or the power cable is unplugged during the operation of Auto Capsule, the last recording file is stored using the backup battery and the device is powered off. 3)

1) Uninterrupted power connection is needed for parking mode recording.
2) When "non-stop recording" mode is selected in the Settings menu, the product can stay in recording mode even when the vehicle is parked.
3) The last recorded file may not be stored if backup battery is low.

+ Occurrence of Event

When one of the events described below takes place, it records for a total of 1 minute (including approximately 5 seconds before the occurrence of the event) and stores it as an event (EVT) file.

1. When an impact is detected during driving/parking mode recording.
2. When the button is pressed once briefly during driving/parking mode recording.

+ Motion Detection

When a motion is detected during parking mode recording, it records a total of 1 minute (including approximately 5 seconds before the moment of detection) and stores it as a motion (MOT) file. 1)

1) If motion files are created continuously during parking mode, as indicated by the LED, go to Settings → Device → LED On During Parking Recording, OFF

+ LED Status Indicator

Category	Operating mode	Status	Color	Blinking cycle
Recording	Wi-Fi Off	Driving mode recording/parking mode non-stop recording	Red	Stays solid
		Standby during parking mode driving	Red	Slow blinking
		Event (impact, button) / motion	Red	Fast blinking
		Wi-Fi is being turned off	Red	Rotates
	Wi-Fi On	Driving mode recording/parking mode non-stop recording	Blue	Stays solid
		Standby during parking mode driving	Blue	Slow blinking
		Event (impact, button) / motion	Blue	Fast blinking
		Wi-Fi is being turned	Blue	Rotates
System		Booting; Format	Purple	Rotates
		Protection from high temperature; No memory car	Purple	Slow blinking
		Error; Alert (safe removal, etc.)	Purple	Fast blinking
		Firmware upgrade	Alternates between red and blue	Fast blinking

+ Safe Removal and Formatting of Memory Card

- Safe removal and formatting of memory card

If the memory card is removed without due caution during recording, the file being recorded will not be saved and it may cause critical damage to the memory card. Always make sure the card is removed safely.

* It is recommended that the memory card is formatted on a regular basis for stable use of the device.

1. When the button located on the side of the device is pressed and held for more than three seconds during recording, the indicator LED will blink rapidly in purple alongside a sound effect and the voice message "Memory card is removed safely."
2. When the protective lid is opened and the memory card is removed, the indicator LED will turn purple alongside the voice message "There is no memory card."
3. When the memory card is re-inserted again into the device, the indicator LED will blink rapidly in blue alongside the voice message "Press the button to start formatting the memory card."
4. When the side button is pressed and held for more than three seconds, it will start the formatting process alongside the voice message "Formatting starts."
5. When completed, the format process ends alongside the voice message "Format is completed."

* Format can also be done through PC Manager program.
* To format on PC, choose "FAT32" for the File System (F) and "32KB" for the Cluster Size (A).

+ Button Operation

See the table below for button operations while using the Auto Capsule.

Press the button briefly	Press the button twice	Press and hold the button
Records manually and stores it as an event file.	Turns Wi-Fi On/Off.	Initiates process for safe removal of memory card. Initiates format process when memory card is inserted.

+ More Functions

- Protection from high temperature

If the temperature inside of the vehicle rises too high, recording automatically stops to protect the device.
When this happens, the LED indicator blinks slowly in purple alongside the voice message "Recording is paused to protect the product from high temperature." When the temperature goes down, recording resumes automatically.

- Reset

If a problem happens to the Auto Capsule and an abnormal state persists for more than five minutes, unplug the power cable and completely switch off Auto Capsule before plugging it again.

+ File Management

Recorded files are saved in the Recordings folder on the memory card.

The file is named as 'yyyymmdd_hhmmss_file type_recording mode.MP4' based on the specific time it was recorded.

Recording mode and status	Name of file
Driving mode recording (normal)	yyyymmdd-hhmmss_NOR_D
Driving mode recording (event)	yyyymmdd-hhmmss_EVT_D
Parking mode recording (motion)	yyyymmdd-hhmmss_MOT_P
Parking mode recording (event)	yyyymmdd-hhmmss_EVT_P
Parking mode recording (non-stop recording)	yyyymmdd-hhmmss_NOR_P

* NOR: normal file / EVT: event file / MOT: motion file

* D : driving mode recording / P : parking mode recording

* 예) Normal file created on Nov 8, 2012 at 9:56:09 a.m. while driving ▶ 20121108-095609_NOR_D.mp4
  Event file created on Nov 9, 2012 at 11:07:35 p.m. while parked ▶ 20121109-230735_EVT_P.mp4
  Motion file created on Dec 23, 2012 at 4:32:50 p.m. when parked ▶ 20121223-163250_MOT_P.mp4

+ Wi-Fi Connection to Smart Manager

Recorded videos can be quickly and easily checked through a smart phone application Smart Manager via built-in Wi-Fi. Videos can be checked in real time through Live View, and various options can be set easily. 1)

+ Turning Auto Capsule Wi-Fi on and off

When the side button is pressed twice, the indicator LED rotates in blue alongside the voice message announcing the start of Wi-Fi connection. When the Wi-Fi connection is established, the indicator LED stays on solidly. Wi-Fi can be turned off by ending Smart Manager or pressing the button twice.

+ Connecting from smart phone for the first time

When Smart Manager is used for the first time, you need to follow a network registration procedure.

* Android : Settings → Wireless and network → Turn on Wi-Fi → Select 'COWON-AW1' from Wi-Fi networks → Enter password

* iPhone, iPad : Settings → Wi-Fi On → Choose a Network → Select 'COWON-AW1' → Enter password

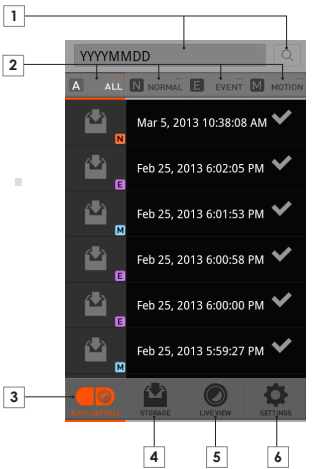
Initial network name: COWON-AW1

Initial password: 1234567890 2)

1) Recording quality may fall during Wi-Fi operation.
2) Change the password to protect private information and use the Auto Capsule securely. The password can be changed in the Settings menu of the PC Manager.

+ Smart Manager

- Android smart device users can download the application from Google Play.
- iPhone and iPad users can download the application from Apple App Store
- It can also be downloaded easily by entering keywords such as COWON, Auto Capsule, Smart Manager, and AW1 in the search field.



1	Enter yyyymmdd with smart phone keyboard to search files Ex) Search files recorded on Nov 8, 2012 → Enter 20121108
2	Files of selected types are shown on the list. ALL : All / NORMAL : Normal / EVENT : Event / MOTION : Motion
3	Files recorded on the Auto Capsule are shown on the list.
4	With Smart Manager, downloaded files can be played or 1) can be directly uploaded to You Tube, etc. through the Share. 2)
5	Check video being recorded in real time with Live View
6	Users can set their preferences and check Auto Capsule information.

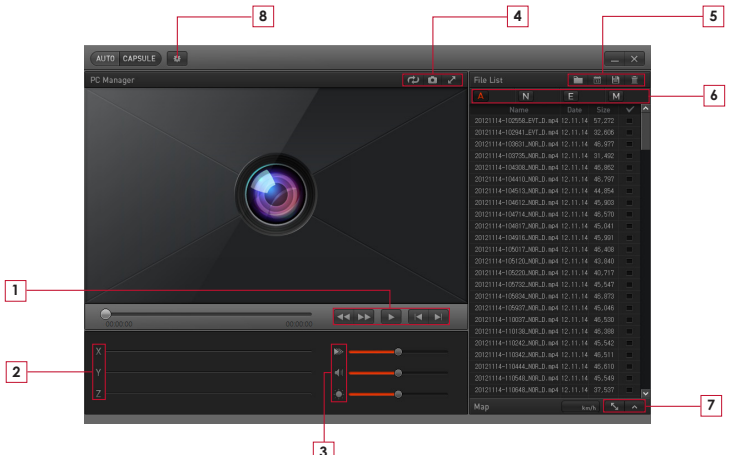
* On iPhone and iPad, an additional Log-in/Log-out tab exists at the bottom. Press the Log-in tab for normal connection.

1) If files cannot be played back with the default video player, download and install a professional media player from Google Play or App Store. (Ex: MX player, etc.)
The quality of file playback may depend on the specification of smart device.

2) Share menu is supported by Android Smart Manager only.

+ PC Manager

The PC Manager can be downloaded from the bundle CD.



+ PC Manager

1		Rewinds/fast forwards the video during playback.
		Plays a selected file.
		Plays the previous/next file.
2		Displays intensity of impact on the X,Y,Z axis of G sensor.
3		Sets playback speed.
		Adjusts the volume.
		Adjust the brightness of the video during playback.
4		Rotates video footage upside down during playback.
		Captures the screen during playback.
		Switches into a full screen mode.
5		Finds a folder of recorded video files.

5		Sorts files recorded on the selected date.
		Saves selected video files on a PC.
		Deletes selected video files.
6		Displays all recorded files on the list.
		Displays only normal files on the list.
		Displays only event files on the list.
		Displays only motion files on the list.
7		Shows the map in full size if a GPS file exists.
		Shows the map if a GPS file exists.
8		Users can set their preferences.

+ Auto Shutdown Timer

After parking mode recording commences, the device operates for a pre-set time, after which the power is turned off automatically.
Auto Shutdown Timer can be set through the Smart Manager and the PC Manager.

* Go to Settings → Recording → Auto Shutdown Timer

+ Setting Parking Mode Voltage

Parking mode voltage can be set through the Smart Manager and the PC Manager.

* Go to Settings → Recording → Set voltage

- Set the voltage value lower if the device goes into parking mode recording while driving.
- Set the voltage value higher if the device does not automatically go into parking mode recording while parked.

+ Setting Auto Shutdown Voltage

When battery voltage falls below the pre-set voltage value after going into parking mode recording, power is turned off automatically to protect the battery.
Shutdown voltage value can be set through the Smart Manager and the PC Manager.

* Go to Settings → Recording → Setting Voltage

- When standby operation time becomes shorter in parking mode recording, set the range of auto shutdown voltage lower.
- The lower the pre-set voltage value, the longer the standby time in parking mode recording, and the higher the pre-set voltage value, the shorter the standby time in parking mode recording.
- If voltage falls below the pre-set auto shutdown voltage value during operation while auto shutdown timer is set, power is turned off regardless of the auto shutdown timer.

* Parking mode recording, auto parking mode voltage, and auto shutdown voltage settings are accessible only during uninterrupted power connection.
* The lower the pre-set auto shutdown voltage value, the greater the risk of battery discharge; the higher the pre-set auto shutdown voltage value, the more effective it is for preventing battery discharge. Set the voltage value to suit your vehicle battery condition before use.

+ Non-stop Recording While Parked

Non-stop recording occurs while the car is parked, and the recorded files are stored as normal (NOR) files.

* Go to Settings → Recording → Parking Recording

+ File Deletion Setting

Deletion can be selected when recorded files exceed the available memory card storage space.

* Go to Settings → Recording → File Deletion Settings

Deletion method	Description	Note
In the order of time	The oldest file is deleted first, regardless of file type.	
Normal, event, motion	Deletes in accordance with storage space quota set for each file type.	50%, 30%, 20% 60%, 30%, 10% 70%, 20%, 10%
Normal + motion, event	Deletes in accordance with storage space quota set for normal + motion/event files.	70%, 30% 80%, 20%

+ Sensitivity of G Sensor

Sensitivity of the G sensor's detection of external impact when driving or parked can be adjusted.

* Go to Settings → Device → G Sensor Sensitivity

- X axis: to the right and left of the driving direction, measured from the center of the vehicle
- Y axis: to the front and back of the driving direction, measured from the center of the vehicle
- Z axis: Up and down, measured from the center of the vehicle

+ Motion Sensor

Sensitivity of motion detection made by the device while parked can be adjusted. 1)

* Go to Settings → Device → Motion Sensor

1) If light reflected by the LED indicator causes motion files to be created continuously during parking mode recording, go to Settings → Device settings → LED On During Parking Recording, OFF

+ Product Specification

Item	Specification	Note
Lens	Full HD wide angle lens, 6 Glass structure	
Image sensor	1/2.7" wide True Full HD CMOS sensor, 1920x1080 pixel	
Recording resolution	Max. 1920x1080P, 30fps	
Recording angle	Diagonal angles of 140°	
Video encoding	H.264 (MPEG-4 AVC)	
Recording file type	Normal file (NOR), event file (EVT), motion file (MOT) 1)	
Wireless connection	Wi-Fi built in	Wireless connection with smart devices
Audio recording	Microphone	
Battery voltage management	Voltage detection circuit built-in	Auto shutdown voltage setting, auto shutdown timer Implement auto parking mode recording 2)
Software	Smart Manager (supported by Android and iOS)	Live View, download, playback, share (Android), settings, etc.
	PC Manager (for Windows PC)	File playback, screen capture, settings, map display 3)
Dimension and weight	38Ø X 102mm / 76.0g	
Storage memory	Max. 32GB memory card	
Operating Temperature	-20℃ ~ 60℃	
Power	DC 12V ~ 24V	
Others	G sensor, speaker, LED status indicator, video-out terminal (composite) / external GPS terminal	

1) Motion file is available in uninterrupted power connection mode only
2) Available only when connected with uninterrupted power cable.
3) Only files recorded with external GPS receiver can be viewed.

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